

S. HYMENOPTERA.

6. Vespidae

by

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The wasps are well represented in the collection made by Prof. SJÖSTEDT in Masai-Land (42 sp., 35 n. sp., 302 specimens). The predominant genus appears to be *Belonogaster* which, although not numerous in species, is certainly abundant enough in specimens. It is a typical african genus, but a species is found in Western and Southern India. Equally numerous in specimens is the wide-ranging genus *Polistes* as represented by the common and widely distributed *P. marginalis*.

Polistes marginalis FAB.

Vespa marginalis FAB., Syst. Ent. 367, 24. — *Polistes marginalis* FAB. Syst. Piez., 272, 17, SAUSSURE, Vespides, II, 62, Pl. VI, f. 2; SMITH, Cat. Hym. Ins. V, 25; GRIBODO, Rasseg. d. Imen. race. nel Mozamb. d. Cav. Fornasini, 1894, 18; Ann. Mus. Civ. Genova, XVI, 238; I (2), 286; MAGRETTI, l. c. I (2), 607; l. c. XIX (2), 36; GERSTÄCKER, Hym. v. d. Deckens Reise, 325; STADELMANN, Die Hym. Ost-Afrikas, 34; BINGHAM, Ann. and Mag. Nat. Hist. XI, 48. — *Polistes africana* PAL. BEAUV. Ins. Afr. et Amér. (1821) 207, Hym. Pl. VIII, f. 4. — *Polistes stigma* SAUSS. Vespides, II, 64, 21, Pl. VI, f. 3.

Kilimandjaro: Kibonoto, 1300—1900 m.; cultivated zone April to September; *Meru* low lands, Ngare na nyuki, December. — Very common and variable. Few of the specimens are so brightly coloured as the specimen figured by SAUSSURE (l. c., Pl. VI, f. 2), most of them having the abdomen much darker coloured, as is also the thorax. The var. *stigma* (having the radial cellule clouded) also occurs.

Polistes Smithii SAUSS.

Polistes Smithii SAUSSURE, Vespides, II, 60, Pl. VII, f. 3; GERSTÄCKER, Peter's Reise n. Mozamb., Zool. V, 470; GRIBODO, Ann. Mus. Civ. Genova, XXI, 287; BINGHAM,

Ann. and Mag. Nat. Hist. XII (7) 48; SCHLETTERER, Ann. d. l. Soc. Ent. de Belg. XXXV, 29; STADELMANN, Hym. Ost-Afrikas, 34; KOHL, Mittheil. Nat. Mus. Hamb. X, 2.

Kilimandjaro, Kibonoto, 1300—1900 m.; May. — The thorax and the legs may be suffused with rufous colour; the cloud in the apex of the fore wings varies in depth of colour; one ♂ has a pale yellow line on the apex of the 2nd abdominal segment.

Icaria SAUSS.

Comparatively few species of this genus have been recorded from Africa, but it appears to be well represented in Madagascar. The 3 Masai species may be separated thus:

- A. Stigma black, the scutellum not keeled, the abdominal petiole becoming gradually widened from the base, not narrowed there into a neck. *africana*.
- B. Stigma pale, the abdominal petiole distinctly narrowed at the back.
The 4th and following joints of the antennae black; the scutellum not keeled; the coxae, trochanters and femora black, the apex of clypeus not yellow. *nigrofemorata*.
The antennal joints not black, the scutellum keeled, the legs without black, the apex of clypeus yellow. *cariniscutis*.

Icaria africana sp. nov.

Dark reddish brown and covered densely with a pale silky pile, the apex of the clypeus somewhat broadly and the apex of pronotum more narrowly pale yellow, as are also more or less of the fore coxae; the apex of the 2nd abdominal segment has a darker coloured yellow border; the antennae and the 4 anterior legs ferruginous, the posterior darker coloured, more blackish. Wings hyaline, the stigma and nervures black; there is a fuscous violaceous cloud in the radial cellule commencing at the middle of the 3rd abscissa of the radius and extending into the cubital cellules. Scutellum roundly convex, its basal slope keeled. Metanotum with only the central furrow striated, the striae fine. Abdominal petiole elongated pyriform, becoming gradually widened from the base, which is not narrowed; it is not two-thirds of the length of the 2nd segment, which is bell-shaped and about one fourth longer than it is wide at the apex; it is very densely pilose. ♀, length to end of 2nd abdominal segment 12 mm.

Kilimandjaro: Kibonoto, 1000—1200 m. April.

Icaria nigrofemorata sp. nov.

Rufo-testaceous, the abdomen darker coloured, the 4th and following joints of the antennae, the coxae, trochanters and femora black, the wings clear hyaline, the costa and stigma pale testaceous, the nervures blackish, the radial cellule except for an oblique hyaline cloud commencing at the end of the stigma fuscous; abdominal petiole more than half the length of the 2nd segment, slender, the basal third narrowed; the 2nd segment about one-fourth longer than its width at the apex. Scutellum rounded gradually, not much raised, nor keeled. Metanotum smooth, densely covered with pale silvery pubes-

cense, the centre with a smooth furrow. ♀, Length to end of 2nd abdominal segment 10 mm. Mandibles fuscous black, the teeth rufous.

Usambara.

***Icaria cariniscutis* sp. nov.**

Dark reddish brown, densely covered with a silky pile; the apex of the clypeus, a line along the eye incision, a distinct line along the apex of the 2nd abdominal segment brownish yellow; there is a lighter coloured, yellow line on the base of the pronotum; the underside of the fore coxae pale yellow; the legs are darker coloured, almost black. Wings hyaline, the apex of the costal cellule, the apical three-fourths of the radial, the cloud continued in a curved line along the anterior part of the cubital cellules, dark fuscous, almost black, the nervures black, the stigma pale ochraceous. Scutellum with a distinct keel down the middle, roundly convex. Centre of metanotum depressed, densely covered with a silky pale pile, and finely transversely striated, the sides more strongly obliquely striated, the striae clearly separated and more or less curved. The 1st abdominal segment fully one half of the length of the 2nd, longish pyriform, the basal fourth distinctly narrowed; the bell-shaped 2nd segment clearly longer than it is wide at the apex. Base of mandibles pale yellow; the flagellum of antennae for the greater part rufous. ♀, Length to end of 2nd abdominal segment 11 mm.

Usambara: Mombo.

Characteristic of this species is the distinctly, stoutly, longitudinally keeled scutellum and the striated metanotum.

***Belonogaster* SAUSS.**

The species of this genus appear to be well represented as regards individuals, but the number of species is not great, being only 5 in number, of which 4 appear to be undescribed, so far as I can make out. The genus is purely African, and there is a good account of the species known to him by the distinguished Austrian Hymenopterologist, Mr F. F. KOHL, in the Ann. d. K. K. Naturh. Hofmus. 1894, p. 319—337.

***Belonogaster juncus* F.**

Vespa junceae FAB. Mant. Ins., 1, 293. — *Raphigaster juncus*, Vespides, II, 14, Pl. 11, f. 2. — *Belonogaster juncus*, GERSTÄCKER, Peter's Reise nach Mozamb., Zool. V, 468; RITSEMA, Tijdschr. v. Ent. XVII, 202; SAUSSURE, Grandid. Hist. d. Madagasc. XX, Pl. 1, fasc. 25, 89 and 90; KOHL, Ann. d. K. K. Natur. Hofmus. 1894, 336.

Usambara: Moinbo, June; *Tanga*: Mkulumusi-caves, July.

***Belonogaster massaicus* sp. nov.**

Black, a curved yellow line on the inner orbits, commencing at the end of the eye incision and extending to the end of the upper 4th of the clypeus, becoming gradually narrowed below; there is a similarly coloured spot below each antenna, — about twice

longer than wide and of equal width; antennæ, except the scape below, the tibiae and tarsi and the mandibular teeth black. Wings almost hyaline, the costal cellule distinctly fulvous; the 2nd abscissa of radius not quite one third of the length of the 3rd and not quite so long as the space bounded by the 2nd recurrent and 2nd transverse cubital nervures, and equal to the space between the 1st and 2nd. The 3rd antennal joint is as long as the following 2 united; the 4th is a little longer than the 5th, which is a little longer than the 6th. Clypeus sparsely punctured, longer than wide; the apex becomes gradually narrowed into a tooth in the middle. Front and vertex thickly covered with short black hair. Abdominal petiole nearly as long as the head and thorax united; it becomes gradually, slightly widened towards the apex; the narrowed basal part of the 2nd segment is slightly, broadly, roundly narrowed, *i. e.* slightly widened at the base and apex; the rest becomes gradually widened, its length being more than its width at the apex. ♀, length 34 mm.

Kilimandjaro: Kibonoto, 1000—1200 m. April.

***Belonogaster erythrospilus* sp. nov.**

Black, densely covered with a whitish or greyish pruinose pile; the greater part of the head and antennæ, the lower part and apex of the prothorax, sternum, scutellum, the 1st abdominal segment, the 2nd except at the apex, the fore legs and the middle coxæ, trochanters and femora ferruginous red; wings fulvous hyaline, more distinctly and deeply so along the fore margin, the apex tinged with fuscous violaceous, the nervures fulvous, the 2nd cubital cellule much narrowed in front, the 2nd abscissa of the radius being about one sixth of the length of the 3rd. Clypeus sparsely punctured, the apex gradually narrowed to a moderately sharp point; the centre of the apical part somewhat stoutly keeled down the middle; the clypeus is smooth, except for some scattered, not very strong, punctures. Malar space as long as the 4th antennal joint; the 3rd antennal joint as long as the following 2 united; the 4th a little longer than the 5th; the apical 2 are almost equal in length; the 4th joint is about one quarter longer than thick. Abdominal petiole almost as long as the following segments united, slender, slightly, gradually widened towards the apex; the narrowed basal part of the 2nd segment is about one fourth of the total length, the rest becomes gradually widened towards the apex, which is shorter than the dilated triangular part. Legs (including the hinder) slender. ♀.

The ♂ has the inner eye orbits from the incision broadly pale yellow; there is a yellow spot between and above the antennæ, the mandibles, except the teeth, the fore coxæ, underside of the middle and of the middle femora are pale yellow. The last joint of the antennæ is a little longer than the penultimate, which is somewhat thicker than it towards the apex, its base being narrowed; the preceding joint is a little shorter and thicker than the penultimate being roundly, broadly dilated below. Clypeus clearly longer than wide; its apex becomes gradually obliquely narrowed to a moderately sharp point. Malar space as long as the 4th antennal joint. The apical 4 joints of the an-

tennæ are entirely rufous, the apical one paler than the others, which are of a darker rufous colour, and are black above. — Length 18—40 mm.

Kilimandjaro: Kibonoto, 1300—3000 m., cultivated zone and rain forest; May. — *Meru* low lands, Ngare na nyuki; October. — *Usambara*, Mombo; June.

The amount of red on the body and legs varies; so does also the colour of the wings, some examples having them lighter — more yellowish coloured than others; but on the whole, the colouration is as I have described it. It has the narrowed 2nd cubital cellule of *pictus* KOHL, but wants the yellow abdominal spots of that species; apart from *pictus* being almost entirely black and the tibiæ and tarsi testaceous, there is a distinct difference in the position of the recurrent nervures; in *pictus* the 2nd is received close to the middle, in the present species distinctly beyond the middle, close to the base of the apical third. — Numerous examples. It is probably a common species.

***Belonogaster gracilis* sp. nov.**

Rufo-ferruginous, the thorax darker coloured; the apex of the 2nd and the following abdominal segments black, as is also the flagellum of the antennæ; a wide transverse yellowish spot on either side of the apex of the 2nd abdominal segment, the space between them being black; legs black, the 4 anterior coxæ, trochanters and femora dark rufous; wings fuscous fulvous, the costa and stigma dark ferruginous, the nervures darker coloured; the 2nd abscissa of the radius about one sixth of the length of the 3rd; the 2nd recurrent nervure is received shortly, but distinctly, beyond the middle. Clypeus wide, distinctly longer than it is wide, sparsely punctured, the apex obliquely narrowed to a point in the middle. Malar space as long as the 4th joint of the antennæ. The 3rd antennal joint as long as the following 2 joints united; the 4th and 5th equal in length. First abdominal segment as long as the head and thorax united, the spiracles prominent; the narrowed basal part of the 3rd segment more than one third of the total length. Head, thorax and apical segments of the abdomen covered with a pale grey pruinose pile. ♀.

The ♂ has the lower part of the eye incision, the face, clypeus, mandibles and a narrow line on the outer orbits, the underside of the middle coxæ, trochanters and femora are pale yellow, the rest of the anterior legs are rufo-testaceous; the remainder of the middle and the whole of the posterior are black. Apex of clypeus broadly rounded, almost transverse. The 7th joint of the antennæ has the apical half slightly dilated, the 8th distinctly, broadly, roundly dilated, the 9th is more distinctly dilated in the middle, the 10th is of almost equal width, the 11th is more distinctly dilated in the middle than is the 9th *i. e.* more narrowed at the base and apex, the 12th is narrowed, of equal width and almost of the same length as the 11th. Length 19—23 mm.

Kilimandjaro: Kibonoto, cultivated zone, 1300—1900 m.; April and May.

A slender species. The males have the wings clearer — more hyaline — than they are in the females, in which they have a distinct brassy tint. The pronotum is narrowly bordered with rufous.

***Belonogaster sex-maculatus* sp. nov.**

Black, densely covered with a silvery pile; the lower part of the front, including the lower part of the eye incision, face, clypeus, mandibles, a large irregularly rounded spot on the apex of the 2nd abdominal segment, a smaller transverse stripe, twice wider than long (counting transversely), on the 3rd, and a similar one, but hardly one fourth of its size, on the 4th, pale yellow; the upper part of the front, vertex, occiput, outer orbits, the sides of mesonotum, scutellums, the greater part of mesopleuræ, the sides of sternum, the greater part of metapleuræ, the apex of metanotum, the 1st abdominal segment and the 2nd, except the black spots, rufo-ferruginous; the mesosternum reddish, largely tinged with yellow. There is a rufous stripe down the centre of the face and clypeus. Antennæ rufo-testaceous, the scape yellow below. Legs black, the 4 anterior coxæ, trochanters and femora pale yellow below, tinged with dark red above. Wings hyaline, the costal cellule tinged with fulvous towards the apex, the costa, stigma and basal nervures rufo-testaceous, the apical nervures black; the 2nd cubital cellule much narrowed in front, the 2nd abscissa of the radius being about one eighth of the length of the 3rd; the 3rd transverse cubital nervure is straight in front, the rest is roundly curved outwardly; the 2nd transverse cubital nervure is received at the base of the apical third of the cellule — at twice the length of the 2nd abscissa of the radius. Apex of clypeus broadly roundly curved; the malar space is short, about twice the length of the pedicle of the antennæ. ♂.

Length 20 mm.

Kilimandjaro: Kibonoto, cultivated zone, May.

The 3rd joint of the antennæ is a little less in length than the following 2 united, the 4th and 5th are equal in length, the 5th a little shorter; the 8th joint has the basal three fourths roundly dilated, the apex obliquely narrowed, the 9th and 10th have the basal half dilated, the apex roundly obliquely narrowed, the 11th becomes gradually roundly widened towards the apex, which is rounded; it is very slightly longer than the 12th, which is of equal width. Face and clypeus covered with short silvery pubescence; the thorax and legs densely with longer blackish pubescence. Abdominal petiole as long as the head and thorax united, not much narrowed towards the apex; the basal third of the 2nd segment is cylindrical, narrowed, the rest becomes gradually widened towards the apex.

Allied to *B. gracilis*, from which it may be known by the 3rd and 4th abdominal segments bearing yellow spots, by the stouter antennæ, with the apical joints more stoutly dilated and, *e. g.* by the difference in the form of the preultimate joint: in *gracilis* it is gradually dilated from the base and apex towards the middle, in *6-maculatus* it becomes gradually widened from the base to the apex. Both species have the abdomen slender and the 2nd segment has a long narrow basal petiole.

*Eumeninæ.***Eumenes** LATR.

The Masai species of this genus may be separated by means of the following table. They are somewhat diverse in form, size and colouration.

1 (4). Largely marked with yellow on the head, thorax and abdomen.

2 (3). Basal half of mesopleuræ yellow, the yellow mark not much narrowed below; middle of petiole not black above, the apex with a broad mushroom-shaped black mark and with 2 yellow spots on the apex, the 2nd segment with a broad transverse and a narrower longitudinal black line. *meruensis* CAM.

3 (2). Mesopleuræ with a basal mark which becomes gradually narrowed below, the middle of petiole with a longish black line, narrowed towards the apex, which has no yellow spots, the 2nd segment black with an oblique basal lateral and a transverse apical one. *xanthaspis* CAM.

4 (1). Black entirely or slightly marked with red.

5 (6). Small (under 10 mm.), the abdominal petiole distinctly, closely punctured, short, thick. *crassinoda* CAM.

6 (5). Large (12 mm. and over), the abdominal petiole long, smooth, slender, at least at the base.

7 (10). Wings uniformly fuscous-violaceous.

8 (9). Thorax and abdominal petiole entirely black, the 2nd transverse cubital nervure broadly roundly curved in front. *maxillosa* D. G.

9 (8). Thorax and abdominal petiole marked with red, the 2nd transverse cubital nervure straight, oblique in front. *erythrospila* CAM.

10 (7). Wings for the greater part hyaline.

11 (12). Head and thorax densely haired, the metanotum without red, the abdominal petiole without yellow on the sides, the fore ocellus larger than the others. *lucasia* SAUSS.

12 (11). Head and thorax not densely haired, the metanotum for the greater part rufous, the petiole marked laterally with yellow.

13 (14). Sides of post-petiole broadly yellow, the black central line only on post-petiole, pro- and metapleuræ not spotted with yellow, the post-petiole clearly separated. *variventris* CAM.

14 (13). Sides of post-petiole with a short yellow line on the base, a black central line on the whole petiole, pro- and metapleuræ spotted with yellow, the post-petiole not clearly separated. *erythraspis* CAM.

Eumenes xanthaspis sp. nov.

Black, the clypeus, a mark roundly dilated above over the antennæ, united to the yellow of the clypeus, labrum, upper half of the mandibles to near the apex, the greater part of the antennal scape below, a narrow line on the outer orbits, prothorax, except

the basal slope from near the top, basal two-thirds of scutellum, post-scutellum, the sides of metapleuræ broadly, the black central line obliquely dilated above, a large line on the basal half of mesopleuræ, extending from the top to the bottom, broad above, gradually narrowed to a fine point below, a line on the sides of the abdominal petiole, extending from the spiracles half way to the apex, rounded below and gradually widened from the base to the apex, a narrow curved line on the extreme apex, a large, oblique mark near the base of the 2nd segment, irregularly narrowed below, 2 large, broad lines on the sides of the apex, roundly dilated on the innerside, the outer waved at the base; and somewhat similar lines, but more narrowed, on the innerside, and lines on the innerside of the 2nd to 5th ventral segments, clear lemon-yellow; the upperside of the antennal scape except for a black line, narrowed at the base, the flagellum, the 1st abdominal segment except the basal all round, the greater part of the top, the black line narrowed at the base, and still more so and acutely at the apex, and the 2nd segment, except for a black spot on eitherside of the base and 3 in a row on the apex, rufous. Legs rufous, all the femora lined with black above, the anterior femora and the tibiæ bright yellow. ♂. Length 17 mm.

Kilimandjaro: Kibonoto, cultivated zone, 1300—1900 m., 19th May.

Antennal hook sharp-pointed, extending to the middle of the penultimate joint. Hinder ocelli separated from each other by a distinctly greater distance than they are from the eyes. The narrowed lower part of the clypeus distinctly shorter than the upper, its apex transverse. Apex of post-scutellum slightly obliquely narrowed to a point in the centre; it is not half the length of the scutellum. Petiole longer than the head and thorax united.

Apart from the reddish colour in *erythraspis* being replaced by bright yellow on the thorax and abdomen, *xanthaspis* may be known by the larger post-scutellum, which is fully half the length of the scutellum, and its apex becomes gradually roundly dilated towards the centre, by the metanotal furrow being less distinctly defined at the base, and not becoming so distinctly, gradually widened towards the apex and by the large yellow mark on the mesopleuræ and sides of metanotum. The wings in *xanthaspis* are hyaline, slightly suffused with violaceous, the costa is testaceous, the nervures black; the tegulæ reddish, black on the innerside at the base.

Eumenes meruensis sp. nov.

Yellow, the abdominal petiole, except at the base and apex, bright-red; as are also the mandibles, except the extreme apex, the antennal scape, basal half of flagellum and the apical joint; the vertex, a short line leading down to the antennal foveæ, the occiput except at the eyes, the mesonotum, except for a narrow yellow line down the outer-edge, a large mark near the middle of the tegulæ, indented by a rufous spot at the outer apical edge, the foveæ at the sides of the scutellum, its apex and the base of post-scutellum, a line down the centre of metanotum, the breasts, the apex of the mesopleuræ and base of the metapleuræ broadly, roundly narrowed at the base, a large mushroom-

shaped spot, on the apex of the 1st abdominal segment, with a transverse line, not reaching to the outer edge, and with a yellow spot between the latter and the basal part, the sides at the base and a longer line down the centre, reaching close to the middle of the segment, a line down the middle of the 2nd segment, with a broader transverse one shortly before the middle, the base of the 3rd segment broadly, the mark narrowed laterally; from its centre a line runs down to the apex and is continued down the centre of the following segments, a line, more than twice longer than wide, and roundly narrowed towards the apex, on the base of the 2nd ventral segment and transverse bands on the base of the 3rd and 4th segments; the 2nd ventral segment and the lower edge of the 2nd above, red, the red colour on the latter dilated at the apex. Wings hyaline, the fore margin to the base of the stigma fulvous; the stigma fulvous, the nervures black. ♀.

Length 23 mm.

Meru low lands, Ngare na nyuki, October.

Clypeus not much longer than its greatest width, the apical half from the eyes roundly narrowed, the apex transverse. Head and thorax covered with a silvery pile, which is longer on the metanotum than elsewhere. The yellow mark on the front is roundly dilated above and curved; the top is roundly curved and narrowed in the centre. Vertex and thorax closely, distinctly punctured; the furrow on the metanotum is narrow and is not dilated towards the apex; shallow. Coxæ, trochanters and femora bright red, the tibiæ and tarsi yellow, the hinder tarsi tinged with rufous.

Belongs to the group of *E. caffra*. It may be known from the latter by the red abdominal petiole. In the latter respect it agrees with *E. lepeleteri* SAUSS. from Senegal; the latter has two spines on the abdominal petiole which are absent in the present species, *lepeleteri* wanting also the 2 lines bordering the outer edge of the mesonotum; there are no black lines on the base of the 3rd and 4th abdominal segments and the red marks on the base of the mesonotum are larger and much more conspicuous.

Eumenes maxillosa DE GEER.

Vespa maxillosa DE GEER, Mém. Hist. Ins. 111, 577, Pl. XXIX, fig. 1 and 2; *Sphex tinctor* CHRIST, Naturg. d. Ins. 1791, 311, Pl. XXXI, f. 1. *Eumenes Savignyi* GUÉR., Icon. Règn. anim. VII, 44 b, Pl. XXII, f. 4. *Eumenes tinctor* SAUSS., Etud. Fam. Vesp. I, 49; SMITH, Cat. Hym. Ins. V, 27. MAGRETTI, Ann. d. Mus. Civico di Stor. Nat. di Genova 1 (2), 609. GERST. Hym. v. D. DECKEN'S Reise, 321; ANDRÉ, Spec. Hym. II, 630. *Eumenes maxillosus* SAUSS., Grandid. Hist. Madg. XX, pt. 1 (1891), p. 153; BINGHAM, Ann. Mag. Nat. Hist. (7), X, 1902, 219; KOHL, Denksch. d. Math.-Naturwiss. der K. K. Akad. d. Wissen. d. Wien, 1906, 56, 80; v. SCHULTHEISS-RECHBERG, VOELTZKOW, Reise in Ostafrika, II, 71; TULLGREN, Arkiv för Zoologi, Stockholm, I, 445; KOHL, STADELMANN, D. Hym. Ost-Afrikas, 28.

Kilimandjaro: A common species, distributed from Egypt to the Cape of Good Hope, being found also in Tropical West Africa and Madagascar.

***Enmenes erythrospila* sp. nov.**

Black, the clypeus, labrum, mandibles except at apex, a mark, gradually roundly widened above, over the antennæ, the lower part of the eye-incision, a narrow line on the outer orbits, the basal 4 or 5 joints of the antennæ, basal slope of pronotum, a triangular mark (the narrowed end above) on the base of propleuræ, more or less of the apex of the scutellum, the sides of metathorax (more broadly on the pleuræ than on the metanotum) a broad band on the apical half of the narrowed basal part of the 1st abdominal segment and the sides and apex above of the dilated apical part, rufous. Front legs dark red; the middle femora and tibiæ tinged with red. Basal two-thirds of the apical joint of the middle tarsi yellow tinged with red. Wings uniformly fuscous-violaceous, the nervures and stigma black. ♀ and ♂.

Length 20—24 mm. ♀.

Kilimandjaro: Kibonoto, 1000—1300 m., September.

Head and thorax closely, but not very coarsely punctured, covered with white pubescence, which is longer on the head than on the mesothorax and longer and denser on the metanotum than on the head. The 3rd joint of the antennæ is almost as long as the following 2 united, these being of almost equal length. Clypeus about one fourth longer than wide, broad, the apex transverse. Hinder ocelli separated from each other by double the distance they are from the eyes.

The ♂ is similarly coloured except that the rufous marks are less extended and may be absent entirely from the abdominal petiole; the red colour on the clypeus is brighter and its sides are more obliquely sloped, more distinctly separated from the centre; it is twice longer than wide, and its apex is somewhat broad and transverse; the basal joints of the flagellum are dark rufous; the hook is black and reaches to the apex of the 9th joint.

Allied to *E. marillosa* D. G., which may be known from it by the absence of red from the thorax and abdominal petiole, by the clypeus being shorter and wider, by the basal joints of the antennæ being almost entirely black, by the 2nd and 3rd transverse cubital nervures being roundly curved from the base to the apex, whereas in *erythrospila* they are straight, oblique and clearly separated at the base from the rest. — The amount of the rufous colour varies; in the ♂ it may be almost entirely absent. Characteristic is the yellowish apical joint of the middle tarsi.

***Enmenes lucasia* SAUSS.**

Enmenes lucasia SAUSSURE, *Vespides*, I, 68; BINGHAM, *Ann. and Mag. Nat. Hist.* X, 1902, p. 220. *Zethus favillaceus* WALKER, *List. Hym. Egyp.*, 1871, p. 28.

Kilimandjaro: Kibonoto, 1000—1900 m., Leitokitok, Steppe. — *Meru* low lands, Ngare na nyuki, January to October. — *Usambara*: Mombo.

A common species extending from Egypt to the Cape of Good Hope. The amount of red on the pro- and metathorax varies as it does also on the 1st abdominal segment; the apex of the latter may be narrowly yellow or more broadly red; the apex of the

2nd segment may have a narrow yellow line. The underside of the antennal scape is red in the ♀; the latter has the clypeus reddish, black in the centre above; the apex is transverse; the mandibles are red on the innerside, middle and, more narrowly, at the apex. There is a small red spot on the innerside of the eye incision and one on the lower part of the front. The propleuræ are rarely entirely red, most examples having a large black mark near the top. The furrow on the apex of the metanotum becomes gradually widened below. The abdominal petiole in the ♀ is smooth; in the ♂ it is closely punctured. In one ♂ there is a distinct yellow transverse line on the post-scutellum. The apical segments of the abdomen may be reddish as described by DE SAUSSURE in the ♂, or they may be black. The extent of the red colouration varies, it being more or less invaded by the black; thus the scutellum may be red entirely, black at the base only, or black at the base and down the centre. The 2nd abdominal segment may be black, or have the basal half at the sides and the ventral surface reddish. Characteristic of this species is the fact that the anterior ocellus is distinctly larger than the others.

***Eumenes erythraspis* sp. nov.**

Black, the scape and basal 3 joints of the flagellum of the antennæ, the clypeus, mandibles, prothorax, a line, dilated at the base, on the sides of the basal half of the mesonotum, scutellums, the metanotum, except the central depression, mesopleuræ, except at the base, apex of metapleuræ, 1st abdominal segment, except for a black line down the centre, reaching nearer to the apex than to the base, the 2nd except for a broad cruciform mark, the longitudinal basal part longer than the apical and narrowed towards the base, the transverse line broader than the longitudinal one, bands on the base of the 3rd and 4th segments, a large spot in the centre of the 2nd ventral segment and the base of the others, black. Wings hyaline, fulvous along the fore margin, the apex, especially at the radial cellule, fuscous violaceous, the stigma fulvous, the nervures black. ♀.

Length 18 mm.

Kilimandjaro: lower Kibonoto, Obstgartensteppe, 16th November.

Clypeus twice longer than wide, its apex slightly broadly incised; above it is a yellow mark, longer than wide, gradually narrowed above, and bordered there with rufous; yellow also is the inner two-thirds of the eye incision, the outer edge of the yellow being bordered with rufous. Hinder ocelli separated from each other by almost double the distance they are from the eyes. Temples very narrow, lined on the innerside with pale yellow. Furrows on apex of metanotum wide and shallow. Abdominal petiole tuberculate laterally shortly beyond the middle. The puncturation on the head and thorax is close and not very strong; the white pubescence is thickest on the metathorax.

The ♂ has the clypeus, a mark, twice longer than wide and obliquely narrowed above, over it, a broad line down the outer edge of the metanotum, a broad, short line in the centre of the base of the propleuræ, a longish conical mark on the sides of the abdominal petiole shortly beyond the middle, a narrow line on its apex and 2 lines,

narrowed on the inner side, on the apex of the 2nd segment, yellow. Apex of clypeus transverse. Antennal scape rufous, yellow below; the basal joints of the flagellum dark rufous; the hook reddish, gradually narrowed from the base to the apex.

***Eumenes variventris* sp. nov.**

Black, the basal 5 joints of the antennæ and the others, except on the top, mandibles, upper part of eye incision, a line over the antennal keel, a narrow line on the outer orbits, prothorax except the prosternum, a small irregular spot on the sides of the mesonotum near the middle, tegulæ except at the base, scutellums, the metanotum except the central depression, a large mark on the mesopleuræ, commencing below the apex of the tegulæ and extending to the apex, almost square, immediately below it and separated only by a narrow black line, which is rounded at the base and becomes gradually narrowed from the top to the bottom, is a mark, longer than wide and obliquely narrowed below, under the hind wings; a curved, oblique line on the lower half of the metapleuræ and the apex, the red on the latter continuous with that on the metanotum, a large triangular mark on the sides of the 2nd segment at the base and the 2nd ventral segment, except for a black line down the centre of the basal half, a more irregular, transverse one near the apex, and the 3rd ventral segment, rufous; the 1st abdominal segment of a brighter red colour above to shortly beyond the lateral teeth from near the base, the sides to shortly beyond the teeth entirely, the rest only on the lower side, the basal half of this being rounded and much wider than the apical; and the ventral apical two-thirds except for a black central line, narrowed gradually towards and reaching to the base of the apical fourth; the other ventral segments are rufo-testaceous, the basal parts broadly yellow, the basal third of the penultimate and the basal half of the last being also pale yellow; the sides of the dilated part of the petiole are yellow, with a narrower black line between the yellow lines, and there is a narrow irregular transverse reddish line near the apex. Legs red, the hind femora black above. Wings hyaline, suffused with fulvous in front, the radial cellule except the basal fourth, fuscous violaceous, the costa, stigma and basal nervures fulvous. Clypeus, labrum, antennal tubercle and the lower part of the eye-incision (the inner part roundly dilated) and a narrow line on either side of the base of the pronotum, yellow. ♂.

Length (total) 20 mm.

Meru low lands, Ngare na nyuki, January.

Clypeus twice longer than wide, the narrower lower part shorter than the widened upper; the sides lined with pale rufous, the apex transverse. The 3rd antennal joint is almost as long as the following 2 united; the hook is long, curved, wide, black, dull rufous at the base, its apex reaching to the apex of the 9th joint. Front, vertex and thorax closely, distinctly, but not very strongly punctured; the furrow on the metanotum is on the apical half only and it becomes gradually widened below. The hinder ocelli are placed close to the eyes.

***Eumenes crassinoda* sp. nov.**

Black, a line on either side of the middle of the clypeus, commencing above at the apex of the sloping basal part, a small spot over the antennæ, rounded above, gradually narrowed below, the mandibles, antennæ, except on top, the basal slope of pronotum, except in the middle from near the top, the propleuræ except narrowly below and an oblique triangular mark close to the apex, commencing near the top and uniting with the lower edge, tubercles, tegulæ and the sides of the abdominal petiole broadly, rufous; a line on the base of the post-scutellum, one on the top of the 1st abdominal segment and one on the apex of the 2nd and 3rd all round, pale yellow. Legs of a paler rufous colour than that on the thorax, their coxæ black above. Wings hyaline, the apical half of the costal cellule, the radial cellule except at the base, the hyaline part extending from the base of the radius and posteriorly from the stigma to the apex of the basal abscissa of the radius. Abdominal petiole as long as the mesonotum, and about two-thirds of the length of the 2nd segment; it is thick, pyriform, the basal slope triangular, with a transverse rufous band on the top; the 2nd segment bell-shaped, a little longer than it is wide at the apex, the base roundly narrowed. ♀.

Length to end of 2nd abdominal segment 8 mm.

Kilimandjaro: Kibonoto, 1000—1300 m., 8th September.

Head closely punctured, more sparsely on the clypeus than on the top; the clypeus clearly longer than wide, its apex slightly roundly incised, the sides forming rounded short teeth. Apex of post-scutellum transverse. Base of the metanotum laterally closely reticulated; the apical depression broad, shallow, not much narrowed above. Pro- and mesopleuræ closely and strongly punctured; the metapleuræ much more sparsely punctured.

The whole body is covered with a white pruinose pile; the sides of the metanotum are broadly rounded; the base of the thorax is quite transverse; the head is a little wider than it.

This little species differs from the other Massai species in its punctured 1st abdominal segment and in its small size; in both these respects it agrees with the Cape *E. rufolineata* CAM., the 2 species may be separated as follows:

The lower two-thirds of the clypeus yellow, marked with rufous above; the propleuræ with only a narrow rufous line on the top, sides of 1st abdominal segment not red, the apex with a red line in front of the yellow one. *rufolineata* CAM.

The clypeus without yellow, the sides with a narrow red line; the propleuræ largely rufous, the sides of 1st abdominal segment broadly red, the apex without a yellow line. *crassinoda* n. sp.

***Labus maculicollis* sp. nov.**

Black, a line on the outer half of the pronotum, a curved spot bordering the base of the lateral scutellar depression at the apical half of the tegulæ, and a narrow, but distinct, line on the apices of the basal 2 abdominal segments, whitish-yellow; legs dark rufous, the fore femora broadly lined with yellow on the lower apical half; the hinder coxæ, trochanters, tibiæ and tarsi, black; wings hyaline, the costa, nervures and stigma

black; the 2nd cubital cellule distinctly appendiculated; the 1st transverse cubital nervure slightly curved downwards; the 1st recurrent nervure is received at a greater distance from the base than is the 2nd from the apex. Abdominal petiole as long as the thorax; the 2nd segment bell-shaped, longer than it is wide at the apex. Clypeus a little wider than it is long, narrowed above, the apex broadly rounded. ♀.

Total length 8 mm.

Kilimandjaro: Kibonoto, 1000—1300 m.; 23 April.

Antennæ stout, the 2nd joint twice longer than wide, the 3rd and 4th almost equal in length. Head a little wider than the thorax, roundly dilated in front of the eyes, the lower part of which, below the incision, reaches almost to the antennæ; the puncturation on the front and vertex strong and close; on the clypeus it is weaker and with the punctures more widely separated. Apex of mandibles brownish. Base of thorax transverse; the puncturation on the pro-mesothorax and basal two-thirds of scutellum strong and close; the apex of scutellum and the postscutellum opaque, aciculated; the latter with a distinct furrow down the centre. Metanotum shagreened, opaque, and with scattered shallow punctures; the basal half with a distinct middle furrow, the apical slope depressed in the middle, the sides thickly covered with silvery pubescence; metapleuræ aciculated and finely, closely striated.

The ♂ has the legs almost entirely black, the clypeus and basal half of mandibles broadly pale yellow; the apex of the clypeus is black and broadly rounded, the sides being also black; the yellow pronotal mark is smaller than it is in the ♀; the antennal hook stout, curved, reaching to the base of the 11th joint; the 4 hind legs are black; the fore tibiæ and tarsi are testaceous; the yellow apical line on the 2nd abdominal segment extends to the ventral surface; in both sexes there is a crenulated furrow on the apex of the 2nd ventral segment.

***Labus annulipes* sp. nov.**

Black, the clypeus except the sides and apex, the outer edge of the pronotum, a spot on the base and apex of tegulæ, the 4 anterior tibiæ except on the anterior side and the posterior to shortly beyond the middle, the black part below being obliquely narrowed; the apex of the 1st and 2nd abdominal segment above and 3 lines (the central the longer) on the apex of the 2nd ventral, pale yellow. Wings hyaline, the stigma and nervures black; the 2nd cubital cellule distinctly appendiculated; the 1st transverse cubital nervure curved downwards, the 2nd roundly curved towards the apex; the radial cellule smoky violaceous, except for an oblique narrow space at the base. The antennæ much dilated at the apex; there is no hook, the last joint is broad, a little longer than broad, its apex rounded, from it a pale raised keel runs along the sides to the 10th joint; the basal joints are as in *L. maculicollis*, there is no proper antennal hook. ♂.

The abdominal petiole in the above described 2 species is much longer than it is in the normal species of *Labus*, it showing a distinct approach to *Zethus*. In this respect it agrees with *L.?* *macrostylus*, KOHL (Denkschr. d. Math.-Natur. Klasse d. K. K.

Akad. d. Wissen., Wien, 1906, p. 64). In that species the 2nd cubital cellule is not appendiculated, as it is in the 2 species I have described. In these, too, the apex of the clypeus is more broadly rounded than usual. Noteworthy is the marked difference in the terminal antennal joints in the 2 species described above. Length 9 mm.

Kilimandjaro: lower Kibonoto, Obstgartensteppe.

***Synagris xanthura* SAUSS.**

SAUSSURE, Vespides III, 155, 44 ♀; Mém. de la Soc. et de Phys. d'Hist. nat. de Genève, XVII, 17; H. STADELMANN, Die Hymen. Ost-Afr. 29 and 30, 5. — *Kilimandjaro*, Kibonoto, 1000—1300 m.; January to September. — *Usambara*: Mombo.

The antennæ vary from black to orange. Some examples appear to have the post-scutellum more strongly bituberculated than others.

***Rhynchium Thomsoni* sp. nov.**

Black, the antennæ, clypeus, a small spot above the antennæ, the outer orbits broadly, pronotum, tegulæ, the scutellum except for a line down the middle (narrower than the red sides), post-scutellum except the apical slope, metanotum, except narrowly in the centre, mesopleuræ, a large semicircular mark on the sides of the 1st abdominal segment and the legs, rufous; 2 small spots on the apex of the 1st abdominal segment and a broad band with irregular basal border, on the apical third of the 2nd segment, pale yellow; wings fuscous-violaceous, the nervures and stigma black. Clypeus pyriform, not much longer than broad; the apical part in the middle depressed, the apex itself transverse. Apex of postscutellum with a steep, rounded slope; the extreme apex bluntly rounded. Sides of metanotum bluntly rounded; irregularly bluntly serrate, the middle transversely striated, the sides at the top more strongly transversely striated. ♀.

Length 23 mm.

Kilimandjaro: Kibonoto, May.

The puncturation on the head and thorax is strong and close; on the abdomen weak and sparse; on the clypeus stronger and sparser than it is on the front; the fovea on the vertex is broad and curved. In one example the 2 yellow spots on the 1st abdominal segment are absent, and the red lateral marks on it are reduced in size; the antennæ, too, are much darker towards the apex; there is a triangular mark on the apex of the propleuræ.

This species, as well as the following closely allied one, belongs to SAUSSURES 1st Division, Études sur la Fam. d. Vespides, p. 103; cf. also vol. III, 175.

Dedicated to the late Mr. JOSEPH THOMSON so well-known for his travels in Massai Land and elsewhere in Africa.

***Rhynchium usambaraense* sp. nov.**

Rufous, a large mark on the apex of the basal segment of the abdomen, obliquely dilated laterally, the narrowed basal part squarish, and the other segments, except for a

broad white transverse line, rounded at the base, on the apex of the 2nd abdominal segment; legs coloured like the thorax; head and thorax covered with a short fuscous pubescence; wings uniformly fuscous violaceous, the nervures black; tegulae coloured like the thorax. Clypeus pyriform, longer than wide, the apex transverse. On the vertex, immediately behind the ocelli, is a transverse depression or fovea, rounded behind, almost transverse in front. Apex of post-scutellum with a rather steep slope, rounded below, the lower part rounded. Sides of metanotum broadly rounded, the middle with 2 or 3 indistinct tubercles. First abdominal segment large, cup-shaped; the 2nd a little longer than it is wide at the apex; below it is slightly depressed, the sides of the depression rounded. ♀.

Total length 25 mm.

Usambara: Mombo, June.

The puncturation on the head and thorax is close and somewhat strong; on the abdomen it is sparser and weaker. The base of the pronotum is transverse, with the sides rounded. The middle of the metanotum is closely, transversely striated.

The ♂ is similarly coloured, except that there is only a small yellowish line on either side of the middle of the 2nd abdominal segment, that the 3rd and 4th are entirely yellow, and that there is a curved broad line on the 5th; the apical fourth of the clypeus is keeled laterally, the apex itself being transverse; the ocellar region is black, and the vertex wants the fovea found in the ♀. The antennal hook is about 4 times longer than thick.

***Odynerus Meyeri* sp. nov.**

Black, the head, except for a large mark covering the ocelli, extending shortly behind them, where it is narrowed and rounded, and extending halfway down the front, becoming gradually widened towards the base, which is transverse, the prothorax, the sides and apex of scutellum narrowly, the basal two-thirds of the mesopleuræ above, the mark not reaching the middle below, tegulae, post-scutellum, metathorax and the greater part of the basal ventral segment of the abdomen, brick-red, as are also the legs; these have the hinder tibiae darker behind; the base of wings hyaline, the middle yellowish hyaline, the rest fuscous violaceous; the 6 or 7 basal joints of the antennæ reddish, the rest black. Clypeus pyriform, as broad as it is long, the apex depressed. Base of thorax broadly rounded above; the metanotum very short, almost transverse, the sides with 4 teeth which become successively thinner and shorter from the top to the bottom; the centre has a steep slope. First abdominal segment cup-shaped; the 2nd as wide as its apex, a little wider than long. Mandibles red, the teeth and apex black. ♀.

Total length 16 mm.

Meru low lands, Ngare na nyuki.

Front, vertex, pro- and mesonotum closely, distinctly, but not very strongly punctured; the metanotum laterally more coarsely punctured; the post-scutellum transversely crenulated above; the depressed basal part of the propleuræ smooth, the apical punctured round the edges; the mesopleuræ closely reticulated, the metapleuræ closely, some-

what strongly, obliquely striated. Abdomen covered with a white blume. Tarsal joints closely spinose.

The ♂ is coloured like the ♀, the clypeus not being yellow as in most male *Odyneri*; the eye incision is tinged with yellow; the clypeus is longer compared with the width, and its apex has a small triangular incision. Antennal hook moderately stout, of equal width, its apex reaching to the middle of the 11th joint; only the apical joints are blackish above.

This fine species is dedicated to Dr. HANS MEYER, the well known German Explorer of Massai Land and Kilimandjaro.

***Odynerus rotundiscutis* sp. nov.**

Dark rufous, the upper part of the front, the vertex, mesonotum, the scutellum, except at the apex, and the basal half of post-scutellum darker coloured, the pleural sutures, a line on the 1st abdominal segment, dilated in the middle, the base and apex of the 2nd segment and a line down the centre, black; a line of equal width on the apex of the 1st abdominal, a wider one on the apex of the 2nd, dilated in the middle and laterally; and below continued to near the base of the segment, it becoming gradually narrowed from the apex to the base; the 3rd and 4th entirely above and below and the 2nd ventral narrowly at the apex and broadly on the sides, pale orange yellow; wings hyaline, the radial cellule for the greater part smoky violaceous, the stigma pale testaceous, the costa and stigma black. Antennæ black, the scape and the basal 2 or 3 joints of the flagellum red. The head densely covered with whitish pubescence, the pubescence on the metathorax longer and of a clearer white colour, that on the mesonotum shorter and darker. Base of thorax transverse, the apex of scutellum bluntly rounded, the apex of the post-scutellum more distinctly rounded above; the lower part becomes narrowed to a blunt point. Clypeus pyriform, as long as it is broad, the apex transverse. The puncturation on the head and thorax is strong, on the mesonotum it is stronger, closer and the punctures run into reticulations; on the mesopleuræ the punctures are distinct, round and clearly separated. The amount of the black colour varies. ♀.

Total length 10—11 mm.

Meru low lands, Ngare na nyuki, 25th November.

The ♂ has the clypeus, the greater part of the mandibles, a large mark on the front between and above the antennæ, it becoming gradually widened from the part between the antennæ to the top, which is transverse, there is a yellow line round the top of the prothorax, dilated at its junction with the transverse basal part, a spot on the mesopleuræ at the teguke, the underside of the antennal scape and the post-scutellum are bright lemon-yellow. The basal 3 or 4 joints of the antennæ are rufous; the hook is dark rufous, moderately stout, and its apex reaches to the middle of the 11th joint. Clypeus pyriform, as wide as long, the apex with a small rounded incision.

Odynerus pulchripilosellus sp. nov.

Brownish dark red, densely covered with depressed silvery pubescence, the front, vertex, occiput, the basal third of the mesonotum, the apex of the mark obliquely narrowed in the middle of the apex, a broad longitudinal line, on the apical two-thirds, on either side of the centre, extending to the apex, where there is a narrow transverse line, there being also a narrower one down the sides, the depression at the base of the scutellum, a line, widened below, on the lower half of the base of the mesopleuræ, breast, a wide line down the centre of the 2nd abdominal segment, widened at the base and, still more so, at the apex, and the base of the 2nd ventral, black; the following parts are lemon-yellow: a medium sized mark over the antennæ, wider than long, slightly, gradually narrowed from the top to the bottom, the upper edge rufous, the outer edges more broadly than the centre, the lower part of the eye incision, a short line on the top of the outer orbits, enclosed by the rufous colour, a line on the base of the thorax, a triangular mark on the outer basal part of the tegulæ and a larger, more irregular one on the inner apical, a line, distinctly dilated laterally, on the apex of the 1st abdominal segment above, and wider ones on the others all round, bright lemon-yellow. Legs pale yellow, the femora except the anterior at the apex, the coxæ and the four anterior tibiæ behind pale fulvous; the hind coxæ with a short stout tooth behind. Wings clear hyaline, the apex of the costal cellule narrowly and the apical half of the radial cellule smoky, the stigma dark fuscous, the nervures darker coloured. ♀. — Total length 10 mm.

Kilimandjaro: Kibonoto, 1000—1300 m., September.

Clypeus a little longer than broad, rather strongly longitudinally punctured, the apex with a shallow incision. Base of thorax transverse. Scutellum sloping obliquely from the base to the apex; its sides with a stout, crenulated keel; the post-scutellum has a steeper, oblique slope; its base has a wide crenulated transverse keel; its apex is broadly rounded. Metanotum short, its sides broadly rounded. First abdominal segment short, cup-shaped, its apex somewhat strongly punctured; the second is a little longer than wide, its apex slightly depressed. — The black marks on the thorax and abdomen vary in size and form.

Odynerus meruensis sp. nov.

Brownish red with the following bright yellow markings: — the clypeus, labrum, inner, basal half of mandibles, a large spot on the front, commencing at the clypeus where it is distinctly narrowed, from there becoming gradually, roundly widened to the top, which has 4 short, rounded projections, a mark, dilated above, beyond the middle, on the lower inner three fourths of the eye orbits, a line along the hinder edge of the pronotum, the base and apex of tegulæ, a spot on the pleuræ below the latter, post-scutellum, a line, curved and widened above, on the outer edge of the metanotum, a line of equal width on the apex of the 1st abdominal segment, a narrow one in the centre, widely obliquely dilated on the sides, where it extends backwards to beyond the middle of the

segment, wider trilobate lines on the apices of the 3rd and 4th, the sides and apex of the 2nd ventral segment broadly and the apices of the following 2 segments, bright lemon-yellow; the following parts are black: an oblique, stout line over the antennæ between the frontal and the eye yellow marks, a broad curved line on the top of the front enclosing the lower ocellus, a broad line, dilated at the base to unite with a lateral line, not reaching to the apex of the mesonotum, and one down the sides, extending from the base to the apex, the basal half wider than the apical; the pleural sutures, sternum; a mark in the centre of the apex of 1st abdominal segment, a broad line on the 2nd, narrowed laterally and with a square projection in the middle of its base, the basal half of the 4th and 5th and a large mark on the 2nd ventral, black. Legs coloured like the body, the coxæ yellow below, the hinder femora blackish above; the middle of the hind coxæ projecting into a distinct tooth. Wings hyaline, slightly fulvous along the fore margin, the costa and stigma testaceous, the nervures black. ♂.

Total length 10 mm.

Meru low lands, Ngare na nyuki, December.

Clypeus a little longer than wide, smooth, the apex ending in 2 triangular teeth, which are covered with depressed golden pubescence. Base of thorax transverse, the sides of the apex broadly rounded. Post-scutellum broadly narrowed towards the apex. 2nd abdominal segment clearly wider than long.

***Odynerus stiraspis* sp. nov.**

Brownish red, a large broad mark on the lower half of the front, its centre above and below with a slight incision, the sides broadly rounded, the lower part distinctly roundly narrowed, clypeus, a small spot on the base of the mandibles, a line on the basal and lateral edges of the pronotum, the apices of the basal 5 abdominal segments, that on the 1st narrow and of equal width, the others broader and waved, the last being broader than the others and more distinctly trilobate; and all are continued backwards along the sides; a mark, wider than long, rounded behind, on the sides of the 1st abdominal segment in the middle and with a smaller rufous spot attached to its innerside, a larger spot, rounded on the innerside, and with the apical outer part narrowed and united to the apical transverse band on the sides of the 2nd, and broad trilobate bands on the apices of the 2nd to 4th ventral segments, bright lemon-yellow; the following parts are black: the front, except the yellow mark and narrowly at the eyes, the spot continued on to the front half of the vertex where it is roundly narrowed behind, the occiput, mesonotum, the parts bordering the scutellums, the base of the pro- and meta-pleuræ narrowly, of the mesopleuræ more broadly, the mark becoming gradually widened below, mesosternum, the back of the 1st abdominal segment except the marks, a narrow line with an irregularly dilated part in the middle on the base of the 2nd above, 3 lines — the central the longer — on the apex of the ventral surface, with 2 curved marks behind them, the 3rd and 4th except for the yellow apices, and the basal third of the 5th, black. Legs and antennæ coloured like the body. Wings fulvous hyaline, the radial

and apical cubital cellules violaceous; the costa, stigma and basal nervures fulvous. Post-scutellum at the apex above with a distinctly crenulated keel, its sides rounded, the centre slightly incised, the apex with a longish oblique slope. Metanotum with the sides broadly rounded on the upper two thirds, the lower third obliquely curved inwardly, broadly margined. First abdominal segment cup-shaped; the 2nd wider than long. ♂.

Total length 13 mm.

Meru low lands, Ngare na nyuki, January.

Antennal brook slender, curved, as long as the preceding 2 joints united. Clypeus distinctly broader than long, rounded above, below obliquely narrowed from the eyes, the apex with a semicircular incision. Base of thorax transverse, margined.

***Odynerus Sjostedti* sp. nov.**

Black, the lower third of the clypeus, apical half of mandibles and the centre of the tegulae rufo-testaceous; a broad curved mark, with an irregular lower edge, on the top of the clypeus, a small trilobate spot over the antennae, base of mandibles broadly, a short line behind the top of the eyes, a broadish curved line on the apex of pronotum, not reaching to the middle of the propleurae, a small spot, almost square, on the sides of the apex of scutellum, a large, transverse pyriform spot on the outer edge of the post-scutellum and lines on the top of the 1st, 3rd, 4th and 5th and a wider one all round the apex of the 2nd, pale yellow; antennal scape below yellow, tinged with rufous; legs rufo-testaceous, the apex of the femora and the greater part of the tibiae pale yellow. Wings hyaline, iridescent, the apex and radial cellule violaceous; the stigma and nervures black; the tegulae rufo-testaceous in the centre and on the outer edge; the base and apex on the innerside pale yellow. ♀. — Total length 7 mm.

Usambara: Mombo, June.

Clypeus as broad as it is long, sparsely punctured, the apex transverse, the outer edges projecting into stout teeth. Eye incisions densely covered with silvery pubescence as are also the mesopleurae and sides of metapleurae. Base of thorax transverse, the sides of the apex bluntly rounded. Apex of post-scutellum almost transverse. The 1st abdominal segment is short, cup-shaped, broadly rounded at the base, the 2nd as long as it is wide; the apex depressed, the depression more strongly punctured than the rest of the segment; the extreme apex raised, smooth.

***Odynerus Yugvei* sp. nov.**

Kilimandjaro, Kibonoto, 1300—1900 m., November.

Length 7 mm. ♂. Similar as regards colouration to *O. Sjostedti*, described above, except that there is a conical spot on the pleurae below the tegulae, that there is a large spot, its upper two-thirds widened, but gradually narrowed below, the top rounded, and the bottom much narrowed, slightly longer than wide, forming a distinct pedicle, on the front; there is a large curved mark on the eye incision; the abdominal bands are wide and the basal one is dilated on the sides; and the coxae and trochanters are black, there

being also a triangular tooth on the outer top part of the hind coxæ. Clypeus almost smooth, a little longer than wide, the apex with a semicircular incision. The apical half of the costal cellule, the radial and the apex of the apical cubital cellule fuscous violaceous, the nervures and stigma black. Underside of antennal scape pale yellow; the underside of the flagellum and the apical 3 joints and the hook entirely reddish brown; the hook about 4 times longer than wide. Tegulæ rufo-fulvous.

I at first thought that this species might be the ♂ of *O. Sjöstedti*, but I am inclined to regard the two as distinct species, *Yngveii* differing in having a mark on the mesopleuræ, in the yellow line on the basal abdominal segment being dilated laterally, in the coxæ and trochanters being black, the tibiæ more broadly yellow; and the hind coxæ have a distinct tooth.

***Odynerus kilimandjaroensis* sp. nov.**

Black, a curved line on the top of the clypeus, with 4 rounded curves on the lower edge, a mark of the usual shape over the antennæ, a minute spot behind the top of the eyes, an interrupted line, narrowed towards the centre, a small triangular spot (the narrowed end at the apex) on the sides of the base of the scutellum, the greater part of the post-scutellum, a shield-shaped mark on the pleuræ under the tegulæ, a line on the top of the 1st, 3rd and 4th abdominal segments and a wider one all round the apex of the 2nd, yellow. The 4 anterior femora broadly, the extreme apex of the hinder and the tibiæ and tarsi rufous-fulvous, the tibiæ yellow in front. Wings hyaline, the radial cellule fuscous violaceous, the nervures and stigma black. ♀. — Total length 8—9 mm.

Meru low lands, Ngare na nyuki, January.

Clypeus pyriform, a little longer than wide, its apex almost transverse. Base of thorax and apex of post-scutellum almost transverse. Sides of metanotum broadly rounded, the centre depressed, less closely punctured than the sides, the centre keeled. Base of metapleuræ longitudinally striated, the striæ longer on the top; following them is a smooth band, the rest being closely longitudinally punctured; the punctures being finer and closer than they are on the mesopleuræ. First abdominal segment cup-shaped, the base with a short pedicle; the 2nd is as long as it is wide at the apex, which is more strongly punctured than the rest. Antennal scape brownish below. There is a distinct tooth on the top of the hind coxæ behind. Tegulæ rufous.

The ♂ has the clypeus, labrum, antennal scape except above, the mandibles except at the apex and the under side of the coxæ, yellow; the flagellum is brownish below; the tegulæ yellow at the base. Clypeus as broad as it is long, its apex with a rounded incision.

***Odynerus rufo-4-pustulatus* sp. nov.**

Black, the clypeus except the narrowed apical part — the black on the top triangularly projecting upwards in the centre — a transverse, small spot over the antennæ,

a spot behind the top of the eyes, the pronotum, including the top of the smooth and shining basal slope, tegulæ, antennal scape and basal 4 joints of the flagellum, the sides of the basal segment of the abdomen, rounded above, broad at the base, gradually narrowed towards the apex, and an irregular squarish spot on the sides of the 2nd segment, brick-red; the apices of the other abdominal segments broadly, of a lighter red colour. Legs with the apical half of the 4 anterior femora, the posterior narrowly at the apex and the tibiæ and tarsi reddish fulvous. Wings hyaline, the radial cellule tinged with violaceous, the stigma testaceous, the nervures fuscous. Tegulæ rufous. ♀. — Length to end of 2nd abdominal segment 8 mm.

Kilimandjaro: Kibonoto, 1300—1900 m., April.

Clypeus as long as its greatest width, its apex transverse. Base of thorax transverse, the sides of the apex broadly rounded. Apex of post-scutellum bluntly rounded. First abdominal segment longer than is usual with *Odynerus*, it showing an approach to that of *Eumenes*; it is almost two-thirds of the length of the 2nd, becomes gradually widened towards the apex and is there double the width of the base. The 2nd segment is longer than it is wide at the apex, is narrowed at the base and has the apex more strongly punctured than the rest.

***Odynerus silaensis* SAUSS.**

Odynerus silaos SAUSSURE, Etudes, I, 213, 119. *Odynerus silaensis* SAUSSURE, l. c. II, 244; VOELTZKOW, Reisen in Madag. u. Ost-Afrika, Senckenb. Natur. Gesellsch. XXVI, Pl. 2, 239; SCHULTHESS-RECHBERG, VOELTZKOW, Reise in Ostafrika, II, 73.

Kilimandjaro: Kibonoto, 1300—1900 m., May.

One example of this widely distributed african species.

***Odynerus armatiscutis* sp. nov.**

Black, a broad curved line, with an irregular lower border, on the top of the clypeus, 2 small, irregular spots, longer than wide, above the centre of the apex, a small spot, a little wider than long, rounded above, transverse below, over the antennæ, a small spot behind the top of the eyes, palpi, a line on the apex of pronotum, narrowed in the middle, the sides rounded behind, the outer sides of the tegulæ narrowly, the apex much more broadly, 2 transverse marks on the centre of scutellum, a line on the apex of the 1st abdominal segment, broadly roundly dilated laterally above, a broader one, all round, on the apex of the 2nd, the central part roundly dilated and wider than the lateral divisions, lines on the apices of the 3rd and 4th, a small narrow line on the centre of the 5th, and a wider, semicircular one on the middle of the 6th, pale yellow. A spot on the outside of the 4 anterior coxæ, the anterior femora in front and their apical hinder part from shortly behind the middle, the apical half of the middle femora in front, the hinder knees and all the tibiæ, pale yellow; the tarsi rufo-fulvous. Wings hyaline, the nervures and stigma black. ♀.

Length to end of 2nd abdominal segment 7 mm.

Kilimandjaro, lower Kibonoto, 22nd September.

Clypeus longer than wide, sparsely punctured, the apex with a shallow rounded incision. Eye incision densely covered with silvery pubescence. Temples broad, rounded, not much narrowed; the occiput not transverse. Base of thorax transverse; the sides of pronotum broadly rounded. Sides of post-scutellum projecting into stout teeth, which have a straight slope in front, rounded from the top to the bottom behind; the apex of the post-scutellum is smooth and transverse. Sides of metanotum rounded, densely covered with a silvery pile, closely punctured, almost reticulated; the sides below project into stout teeth. First abdominal segment short, broadly rounded behind; the 2nd is as broad as it is long. The head and thorax are somewhat closely and strongly punctured; the punctures on the metapleuræ run into striæ.

***Odynerus enemophilus* sp. nov.**

Black, the clypeus, mandibles, the space between and immediately above the antennæ, the outer orbits, the edges of the pronotum narrowly, a transverse line on the scutellum, the sides of metanotum, the sides of the 1st abdominal segment more or less broadly on its basal half, its ventral surface, the apical half or so of the femora, the tibiæ and the tarsi, dark red; as are also the antennal scape and the following two joints; wings fuscous violaceous, paler in the centre, darker along the apex, the nervures black. Clypeus clearly longer than wide; the apical part depressed, the sides of the depression forming keels; the apex transverse. Apex of post-scutellum broadly rounded. First abdominal segment cup-shaped; the 2nd as long as it is wide at the apex. ♀.

Total length 13—14 mm.

Kilimandjaro: Kibonoto, 1300—1900 m., April.

Front more or less reticulated. Apical slope of post-scutellum longitudinal striated at the base above, the rest with longish punctures, the centre with a transverse line of rugosities. The sides of metanotum closely reticulated-punctured, the centre below somewhat stoutly transversely striated. Base of thorax transverse, the sides of metanotum broadly rounded. Apices of tarsal joints spinose. The base of the 1st abdominal segment has a short neck.

***Odynerus curvirufolineatus* sp. nov.**

Black, the clypeus yellow tinged with rufous, the underside of antennal scape red, slightly tinged with yellow, the under side of antennal flagellum dark brick-red; the sides of the basal slope of pronotum broadly — more broadly than the black central part — a large triangular mark — the narrowed end at the apex — on the top of the pronotum, not reaching to the middle of the pleuræ, tegulæ, apical third of scutellum, the post-scutellum, except the middle of apical slope, a curved line on the apical slope of metanotum, the sides of 1st abdominal segment broadly, the apex more narrowly, the sides of the 2nd segment on the basal two-thirds and the apex more narrowly, rufous;

the apices of the 3rd, 4th and 5th broadly red, tinged with yellow; the 6th almost entirely dark red; the apices of the 3rd to 5th ventral segments red, slightly tinged with yellow; the last black, slightly reddish at the base. Legs of a paler, brighter red than that on the body; the femora black above at the base. Wings clear hyaline, the radial cellule smoky from the 2nd transverse cubital nervure, the stigma testaceous, the nervures black. ♂.

Total length 7 mm.

Kilimandjaro: lower Kibonoto, Obstgartensteppe, 14th May.

Clypeus longer than wide, the apex with a large triangular incision. Antennal keel triangular above, its centre furrowed. Base of thorax and apex of post-scutellum transverse; the apical slope of metanotum closely covered with distinct roundly curved striæ. Metapleuræ smooth, densely covered with depressed white pubescence. Basal slope of 1st abdominal segment smooth; the segments densely covered with silvery pile.

This species is hardly typical *Ancistrocerus*, there not being a distinct ridge on the 1st abdominal segment.

***Odynerus (Ancistrocerus) kibonotensis* sp. nov.**

Black, the clypeus, except for an anchor-shaped mark in the centre, the top curved yellow part being wider than the lateral, a small spot over the antennæ, a smaller one behind the top of the eyes, a narrow interrupted line on the pronotum, base of post-scutellum, the spines on the lower outer edge of the metanotum, a line on the apex of the 1st abdominal segment above, a broader one on the 2nd all round, and a narrow one on the top of 3rd, pale yellow; legs rufo-fulvous, the coxæ black except at the apex, the 4 hinder femora infuscated, the anterior tibiæ tinged distinctly with yellow; wings hyaline, iridescent, the nervures and stigma fuscous. Tegulæ dark rufous. ♀.

Total length 8 mm.

Kilimandjaro: Kibonoto, 1000—1200 m., 24th April.

Clypeus pyriform, its centre strongly, sparsely, its sides more weakly punctured, the apex with a shallow incision. Occiput transverse, the temples slightly roundly narrowed. Antennæ stout, the scape yellow below. Pronotum transverse, the sides of the metanotum broadly rounded. Apex of post-scutellum gradually narrowed to a blunt point. The 1st abdominal segment is a little longer than it is wide at the apex; on the base is a stout transverse keel; its underside is rufous; the 2nd is longer than it is wide at the apex, which is slightly depressed; the 3rd is much more strongly punctured than the basal 2; the others are smooth. There is a smooth curved belt near the base of the metapleuræ, with an irregularly punctured triangular space at the base below; the rest is more closely and regularly punctured. — The transverse keel on the basal abdominal segment is stronger, more conspicuous, more clearly defined and nearer the base than usual.

Ancistrocerus (Nortonia?) lineaticollis sp. nov.

Black, the head and thorax densely, the base of abdomen sparsely covered with longish fuscous pubescence, 2 small spots over the antennæ (some times obsolete) a narrow, but distinct line on the base of pronotum, one on the apex of the 1st, 2nd, 3rd (the line on the 2nd and 3rd extending to the ventral surface) and 4th and a short one in the centre of the 5th, whitish yellow; the basal 5 joints of the antennæ bright red, the apical half, the scape and the pedicle black above, the other joints of a duller brick red, black above; legs bright red, the coxæ, trochanters and basal two-thirds of the femora black. Wings fuscous violaceous, the costa and stigma dark rufo-testaceous, the nervures black, the tegulæ rufous. Clypeus pyriform, a little longer than wide, the apex distinctly bidentate. The sides and top of the upper half of the metanotum keeled, the keel dilated below; the top of the keel rounded; at the bottom of the sides is an oblique tooth. Apex of post-scutellum transverse, its apical slope oblique. Base of thorax transverse, without projecting angles. 2nd abdominal segment longer than it is wide at the apex. ♀.

Length to end of 2nd abdominal segment 10 mm. — *Meru*, rain forest, 3500 m. Jan.

Temples wide, rounded. Abdominal petiole with a distinct neck at the base as in *Nortonia*; the segment rounded at the base above, cup-shaped, closely, distinctly, but not very strongly punctured.

The ♂ is similarly coloured, except that the clypeus has a curved irregular broad line on the sides of the lower two-thirds, the line roundly dilated on the innerside above; its apex has a distinct triangular incision; the antennal hook is stout, narrowed towards the apex and does not reach to the base of the 11th joint.

Odynerns (Nortonia) massaicus sp. nov.

Black, the clypeus, mandibles, frontal keel, a line on the top of the outer orbits, top of basal slope of pronotum broadly, the lower edge narrowly, the upper half of the base of propleuræ broadly, the apex narrowly, tegulæ, tubercles, antennæ scape, and the base and apex of the flagellum, rufous, as are also the abdominal segments narrowly behind the yellow lines, the basal segment entirely below and the apices of the 3rd and following dorsal segments; the 1st and 2nd with yellow lines on the apices, the 1st on top only, the 2nd on top and bottom. Wings hyaline, the radial cellule from near the base and the apical 2 cubital cellules broadly fuscous violaceous in front, the stigma dark testaceous, the nervures black. Apex of metanotum on top forming 2 rounded lobes, margined, reticulated below the keels, the rest finely, closely, transversely striated. The base of the 1st abdominal segment is raised, the top of the raised part almost forming keels, the sides oblique, the middle of the top slightly curving downwards; above this keel, and clearly separated from it, is the ordinary transverse ridge of the *Ancistrocerus* group. 2nd abdominal segment longer than it is wide at the apex. Apex of clypeus with a minute black tooth on eitherside. Antennal keel longish, the upper half furrowed. Legs of a paler red than that on the body, the hind coxæ with a curved tooth near the middle, its lower edge transverse. The puncturation on the head is close, on the thorax it is closer. ♀. — Length 7 mm. — *Kilimandjaro*: Kibonoto, 1300—1900 m., 11th May.

Covered with a grey pile. Metapleuræ irregularly weakly reticulated above, the rest somewhat strongly aciculated; the sides of the lower part forming whitish ridges, the top forming a small, the lower part a longish tooth, the part between the 2 teeth being roundly curved.

***Odynerus (Nortonia) maculiscapus* sp. nov.**

Black; the head, thorax and base of abdomen densely covered with long fuscous pubescence; the underside of the antennæ, the base of the scape and of the 3rd joint also above, the greater part of the prothorax, the rufous colour on the pleuræ triangular, extending below the middle but not extending to the apex, the tubercles and tegulæ, rufous; the apex of the 1st abdominal segment above, and of the 2nd, 3rd, and 4th all round, the apical 2 lines narrower, the 2nd wider than the basal, lemon-yellow. Wings highly iridescent, hyaline, fuscous violaceous towards the apex, the stigma testaceous, the nervures yellow, tinged with rufous; clypeus as wide as long, the apex with a shallow rounded incision. Middle of mandibles broadly pale testaceous. Hind coxæ with a short rounded tooth shortly above the middle on the outside. ♂. — Total length 8 mm.

Kilimandjaro: Kibonoto, 1300—1900 m., 25th September.

A rather slender species with the base of abdomen distinctly if shortly petiolated, the apex of post-scutellum obliquely narrowed towards the centre and the apical slope of the metanotum bordered by a keel, which curves downwards in the middle above. 1st abdominal segment longish cup-shaped, rounded at the base above; the 2nd is longer than it, is wide at the apex; its base depressed. The antennal hook barely reaches to the base of the 11th joint. Coxæ and greater part of the trochanters black. Base of thorax not quite transverse.

***Nortonia striativentris* sp. nov.**

Black, 2 irregular marks on the sides of the clypeus, the upper the larger and separated from the lower by a narrow oblique black line, the lower becoming obliquely widened on the innerside to the middle, then obliquely narrowed below, the lower part being narrower than the upper; narrow lines on the apices of the basal 3 abdominal segments all round, a narrower one on the top of the 4th and a longish, wide line on the outside of the hind tibiae, pale yellow; wings smoky violaceous, the nervures and stigma black; tegulæ black. Post-scutellum with a steep slope, the apex rounded broadly. Upper outeredge of metanotum broadly margined. Clypeus as wide as long, the apex with a deep, wide, semicircular incision; the sides forming teeth, which become gradually narrowed towards the apex. Base of thorax transverse. 1st abdominal segment cup-shaped; the base forming a short, but distinct petiole; the 2nd is as wide as long, below closely longitudinally, distinctly striated. ♂. — Length (total) 12 mm.

Kilimandjaro: Kiboscho, 3000—4000 m., February.

Head, thorax and base of abdomen densely covered with longish white pubescence, closely punctured, more or less reticulated on the mesonotum and, more distinctly, on the apical slope of the metanotum. 1st abdominal segment irregularly, longitudinally reticulated-striated; the back of the 2nd finely, closely longitudinally striated, the striae more or less interlacing.

This species should be known by the black, densely haired head and thorax, petiolated abdomen and strongly striated 2nd ventral abdominal segment.

Tanyzethus gen. nov.

Abdominal petiole long, slender, cylindrical, longer than the rest of the abdomen and still longer than the head and thorax united; the 2nd segment with the basal half narrower than the 1st, cylindrical; the apical widened, triangular. Clypeus roundly convex, wider than long, the apex raised, clearly separated behind. Mandibles rather short, broad, the apex distinctly bidentate, the teeth clearly separated. Head cubital, rounded in front, the temples wide. Thorax more than twice longer than wide, broadly rounded in front, narrowly behind. Legs slender. Antennæ stout, placed on the middle of the face. Base of pronotum clearly margined.

The type of this genus looks like a *Zethus* of the *Didymogastra* section. It differs from the old world species in the 2nd abdominal segment having its basal half narrowed into a long thin, round petiole. From the American it is easily enough distinguished by the very long, thin, cylindrical petiole of uniform thickness except for being slightly narrowed at the base, by the shorter and broader mandibles, which have the teeth more clearly defined, broader, more distinctly separated, and by the 2nd and 3rd transverse cubital nervures being united in front, almost appendiculated, and by the apex of the clypeus above having a broad rounded border and a depression below. It is obvious that the genus is closely related to the African *Paramischocyttarus* MAGRETTI; that genus should be known from it by the mandibles being tridentulate and by the scutellums having a longitudinal furrow down the middle; judging, too, from MAGRETTI'S figure, the metathorax in his genus is distinctly excised laterally, while in mine it forms a gradual rounded curve from the base to the apex, without any incision or depression; also, judging from the figure, the temples are obsolete, while in *Tanyzethus* they are well developed. Finally *Mischocyttarus* belongs to the Social Vespidae, not to the *Eumenidae*.

Tanyzethus africanus sp. nov.

Black, the clypeus except round the top and sides, the mandibles except the apex, a small spot behind the top of the eyes on the outer side, and the tegulae, red, the legs of a paler red, the hind coxæ and femora black above, their tibiae and tarsi entirely blackish; a narrow interrupted line on the apex of the 1st abdominal segment and the apex of the 2nd and 3rd narrowly, pale yellow. Wings hyaline, the nervures and stigma black; the fore wings narrowly, indistinctly smoky in front; the 2nd and 3rd transverse cubital nervures unite in front. Abdominal petiole slender, curved and narrowed at the base, twice the length of the thorax; the basal half of the 2nd segment narrower than it, cylindrical, the dilated apical part triangular; there is a small spot on the outer edge of the 3rd ventral segment, a line on the 4th and a small spot in the centre of the 5th. ♀. — Total length 14 mm. — *Kilimandjaro*: Obstgartensteppe, 24th March.

Head and thorax closely and strongly punctured; the upper parts sparsely, the pleuræ and metanotum densely covered with silvery pubescence. Clypeus broadly, roundly

convex, more strongly and widely punctured than the front; its apex in the centre slightly roundly incised at the apex, which is raised, rounded above. Temples roundly narrowed, as long as the part of the top of the eyes behind the incision. Hinder ocelli separated from each other by a distinctly greater distance than they are from the eyes. Scutellums slightly depressed in the middle. Metanotum with a narrow, clearly defined furrow down the middle; the metapleuræ bordered above by a fine keel and below the middle by a furrow; the part between these is closely, irregularly striated; the part below the furrow is strongly striated at the base, the rest finely, closely, obliquely striated; this part below is bounded by a distinct keel. Mandibles short, broad, bidentate, the lower tooth the larger.

Belonogaster appears to be the predominant wasp Genus in Tropical Afrika, almost equalling *Polistes* in the abundance of specimens. *B. rufipennis* D. G. (Ent. News II, p. 42) has been recorded by Fox from Kilimandjaro, but this a species or name, which is difficult to trace, and is included by Mr. F. F. KOHL in his Monograph in the form he has described under the name of *pictus*, and by other authors is regarded as a synonym of *griseus* F.

September 1908.

List of Vespidae hitherto recorded from the Kilimandjaro and Meru district.

Vespinæ.

- | | |
|---|---|
| 1. <i>Polistes marginalis</i> FAB. | 5. <i>Belonogaster erythrospilus</i> n. sp. |
| 2. » <i>Smithii</i> SAUSS. | 6. » <i>gracilis</i> n. sp. |
| 3. <i>Icaria africana</i> n. sp. | 7. » <i>sexmaculatus</i> n. sp. |
| 4. <i>Belonogaster massaicus</i> n. sp. | |

Eumeninæ.

- | | |
|---------------------------------------|--|
| 8. <i>Eumenes xanthaspis</i> n. sp. | 23. <i>Odynerus meruensis</i> n. sp. |
| 9. » <i>meruensis</i> n. sp. | 24. » <i>stiraspis</i> n. sp. |
| 10. » <i>macillosa</i> D. G. | 25. » <i>Yngvei</i> n. sp. |
| 11. » <i>erythrospila</i> n. sp. | 26. » <i>kilimandjaroensis</i> n. sp. |
| 12. » <i>lucasia</i> SAUSS. | 27. » <i>rufoquadripustulatus</i> n. sp. |
| 13. » <i>erythraspis</i> n. sp. | 28. » <i>silaensis</i> SAUSS. |
| 14. » <i>variventris</i> n. sp. | 29. » <i>armatiscutis</i> n. sp. |
| 15. » <i>crassinoda</i> n. sp. | 30. » <i>cnemophilus</i> n. sp. |
| 16. <i>Labus maculicollis</i> n. sp. | 31. » <i>curvirufolineatus</i> n. sp. |
| 17. » <i>annulipes</i> n. sp. | 32. » <i>kibonotensis</i> n. sp. |
| 18. <i>Synagris xanthura</i> SAUSS. | 33. <i>Ancistrocerus (Nortonia) lineaticollis</i> n. sp. |
| 19. <i>Rhynchium Thomsoni</i> n. sp. | 34. <i>Odynerus</i> » <i>massaicus</i> n. sp. |
| 20. <i>Odynerus Meyeri</i> n. sp. | 35. » » <i>maculiscapus</i> n. sp. |
| 21. » <i>rotundiscutis</i> n. sp. | 36. <i>Nortonia striativentris</i> n. sp. |
| 22. » <i>pulchripilocellus</i> n. sp. | 37. <i>Tanyzethus africanus</i> n. sp. |